

IN THE CLAIMS:

Please amend claims as follows:

1. (Currently Amended) A system, ~~providing access points to a communication network, the system~~ comprising:

a plurality of access points distributed through a plurality of nodes of said system, wherein components of each access point of said plurality of the access points is divided into two or more groups located in corresponding two or more nodes of said plurality of the nodes, said two or more nodes being remotely located relative to each other, such that each of said two or more nodes is configured to establish a remote communication link with one or more of said two or more nodes, wherein nodes of said plurality of the nodes are organized in a hierarchical order, such that a number of highest layer components of said plurality of the access points comprised in said plurality of the nodes is smaller than a number of lowest layer components of said plurality of the access points comprised in said plurality of the nodes in order to reduce a total number of components needed to provide said plurality of the access points of a communication network of said system.

~~a first radio node for providing a device with access to the communication network, wherein the radio node has a first set of access point components;  
a second radio node for providing a device with access to the communication network, wherein the second~~

~~radio node has a second set of access point components; and wherein the second set of access point components are different from the first set of access point components,~~

~~a controller node remotely located from coupled to the first radio node and the second radio node and communicatively coupled to the first and second radio nodes via a remote communication link, wherein the controller node has a third set of access point components complementary to the first and second set of access point components, and~~

~~wherein one of the access points provided to the communication network comprises a combination of the first set of access point components and the third set of access point components, and another one of the access points provided to the communication network comprises a combination of the second set of access point components and the third set of access point components and~~

~~a system controller for controlling the first and second radio nodes, wherein the system controller is configured using a physically distributed hosting function incorporated into at least one of the first radio node, the second radio node, and the controller node, and wherein the system controller is logically centralized.~~

Claims 2-25 are cancelled

26. (New) The system of claim 1, wherein each access point of said plurality of the access points comprises corresponding two

or more nodes of said plurality of the nodes, said corresponding two or more nodes are:

an access dot, comprising a radio frequency layer component; and

an access dot controller, comprising an access point software layer component.

27. (New) The system of claim 1, wherein said remote communication link is a wireless communication link, a short-range wireless communication link, a BLUETOOTH link, or a wired link.

28. (New) The system of claim 1, wherein each of said two or more groups located in said corresponding two or more nodes of said plurality of the nodes comprises a remote link driver configured to provide said remote communication link by extending a bus or using a protocol stack tunnel between corresponding components of said each of said two or more groups.

29. (New) The system of claim 1, wherein each access point of said plurality of the access points comprises corresponding two or more nodes of said plurality of the nodes, said corresponding two or more nodes are:

an access dot, comprising a radio frequency layer component; and

an access dot controller, comprising an access point software layer component,

wherein a physical layer component layer component is comprised in said access dot layer or in said access dot controller.

30. (New) The system of claim 1, wherein each access point of said plurality of the access points comprises corresponding two or more nodes of said plurality of the nodes, said corresponding two or more nodes are:

an access dot, comprising a radio frequency layer component; and

an access dot controller, comprising an access point software layer component,

wherein an access point software layer component is comprised in said access dot layer or in said access dot controller.

31. (New) The system of claim 1, further comprising one or more system controllers, wherein each system controller of said one or more system controllers is configured to control one or more access points of said plurality of the access points distributed through said plurality of the nodes.

32. (New) The system of claim 31, wherein at least one of said one or more system controllers is logically centralized and implemented as a physical switch.

33. (New) The system of claim 31, wherein at least one of said one or more system controllers is logically centralized and implemented using a physically distributed hosting function incorporated into one or more access points of said plurality of the access points distributed through said plurality of the nodes.

34. (New) The system of claim 1, wherein each access point of said plurality of the access points comprises corresponding two

or more nodes of said plurality of the nodes, said corresponding two or more nodes are:

- an access dot, comprising a radio frequency layer component;

- an access dot controller; and

- an access dot system controller, comprising access point software layer component.

35. (New) The system of claim 1, wherein each access point of said plurality of said access points comprises corresponding two or more nodes of said plurality of the nodes, said corresponding two or more nodes are:

- an access dot, comprising a radio frequency layer component;

- an access dot controller; and

- an access dot system controller, comprising access point software layer component,

- wherein a physical layer component is comprised in said access dot layer or in said access dot controller, and

- wherein an access point software component is comprised in said access dot layer or in said access dot controller.

36. (New) A method, comprising:

- receiving or transmitting a communication signal by any access point of a plurality of the access points of a communication network of a system for further processing, said plurality of the access points being distributed through a plurality of nodes of said system,

- wherein components of each of said plurality of the access points are divided into two or more groups located in corresponding two or more nodes of said plurality of the nodes, said two or more nodes being remotely located relative to each

other, such that each of said two or more nodes is configured to establish a remote communication link with one or more of said two or more nodes, and

wherein nodes of said plurality of the nodes are organized in a hierarchical order, such that a number of highest layer components of said plurality of the access points comprised in said plurality of the nodes is smaller than a number of lowest layer components of said plurality of the access points comprised in said plurality of the nodes in order to reduce a total number of components needed to provide said plurality of the access points of the communication network of said system.

37. (New) The method of claim 36, wherein each access point of said plurality of the access points comprises corresponding two or more nodes of said plurality of the nodes, said corresponding two or more nodes are:

an access dot, comprising a radio frequency layer component; and

an access dot controller, comprising an access point software layer component.

37. (New) The method of claim 36, wherein said remote communication link is a wireless communication link, a short-range wireless communication link, a BLUETOOTH link, or a wired link.

38. (New) The method of claim 36, wherein each of said two or more groups, located in said corresponding two or more nodes of said plurality of the nodes, comprises a remote link driver configured to provide said remote communication link by extending a bus or using a protocol stack tunnel between

corresponding components of said each of said two or more groups.

39. (New) The method of claim 36, wherein each access point of said plurality of the access points comprises corresponding two or more nodes of said plurality of the nodes, said corresponding two or more nodes are:

- an access dot, comprising a radio frequency layer component; and

- an access dot controller, comprising an access point software layer component,

- wherein a physical layer component layer component is comprised in said access dot layer or in said access dot controller.

40. (New) The method of claim 36, wherein each access point of said plurality of the access points comprises corresponding two or more nodes of said plurality of the nodes, said corresponding two or more nodes are:

- an access dot, comprising a radio frequency layer component; and

- an access dot controller, comprising an access point software layer component,

- wherein an access point software layer component is comprised in said access dot layer or in said access dot controller.

41. (New) The method of claim 36, wherein each access point of said plurality of the access points comprises corresponding two or more nodes of said plurality of the nodes, said corresponding two or more nodes are:

an access dot, comprising a radio frequency layer component;

an access dot controller; and

an access dot system controller, comprising access point software layer component.

42. (New) The method of claim 36, wherein each access point of said plurality of the access points comprises corresponding two or more nodes of said plurality of the nodes, said corresponding two or more nodes are:

an access dot, comprising a radio frequency layer component;

an access dot controller; and

an access dot system controller, comprising access point software layer component,

wherein a physical layer component is comprised in said access dot layer or in said access dot controller, and

wherein an access point software component is comprised in said access dot layer or in said access dot controller.